

REMARKS

Interview Summary

Applicants representatives, John Lanza and Jeffrey Buchholz had a telephonic interview with Examiners Eli Mekhlín and Jennifer Michener on June 15, 2010. Potential claim amendments and the cited references were discussed.

Status of the Claims

Prior to entry of the instant amendments claims 33 – 65 were pending and claims 1 – 32 have been previously withdrawn. With entry of the current amendments, claims 36 – 38 are cancelled, claims 33 and 51 are amended and new claims 66 – 75 are added. After entry of this amendment, claims 33 – 35, 39 – 75 will be pending. Support for the amendments can be found throughout the specification and at least in paragraphs 0004 and 0057 – 0062 of the application as published, which corresponds to page 1, lines 24 through 27 and page 12, line 30 through page 13, line 26 of the application as filed.

Rejections under 35 U.S.C. § 112, first paragraph

Claims 33 – 65 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. The Examiner asserts that “the claims . . . indicate that ‘immediately prior’ to being combined with an electrolyte, the fibrous material passes through a 4x4 shake test,” that “there is no support for this processing limitation.” See page 4 of the Office Action dated March 1, 2010. Applicants submit that this rejection is now moot, as the instant claim amendments remove the word “immediately.” Applicants respectfully request that this rejection be withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 33 – 65 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. The Examiner asserts that “[t]he term immediately is not defined . . .” See page 6 of the Office Action dated March 1, 2010. Applicants submit that this rejection is now moot, as the instant claim amendments remove the word “immediately. Applicants respectfully request that this rejection be withdrawn.

Rejections under 35 U.S.C. § 103(a) based on Holland & Reher

Claims 33, 34, 36 – 45, 47 – 53, 55 – 60 and 62 – 65 stand rejected under 35 U.S.C. 103(a) as allegedly obvious over U.S. Patent No. 5,468,575 to Holland, et al. (the Holland patent) and U.S. Patent Application Publication No. 2003/0182972 to Reher, et al (the Reher publication). Applicants respectfully traverse these rejections.

Applicants respectfully point out that as recited in the MPEP § 2143, "to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation . . . to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations." For at least the reasons set forth below, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

Applicants assert that the combination of the Holland patent and the Reher publication fails to teach each and every element of the claimed invention. Specifically, the cited references fail to teach "fibrous material in fiber form" being combined with an electrolyte and/or disposed in a battery case. As the Applicants have previously discussed and as the Examiner has noted, the Holland patent teaches webs of fibrous material that are combined with an electrolyte and the Reher publication only describes fibrous material combined with electrode material in an aggregate form. See, for example the office action dated March 1, 2010 at page 4. Simply, neither the Holland patent nor the Reher publication teach or fairly suggest adding fibrous material in fiber form to an electrolyte. The Holland patent only teaches webs of fibrous material added to the electrolyte and/or the battery case, and the Reher publication only teaches a fibrous material and electrode material in a paste or aggregate form, when added to the battery case.

Additionally, Applicants assert that there is no motivation to combine the references, let alone an expectation of success in doing so. Reher teaches that improved battery performance is the result of adding the fibers to an electrode material. Simply combining the fibrous material with electrolyte and disposing the electrolyte and fibrous material in the case would not obtain the results described in Reher. The fibrous material in fiber form as claimed simply cannot serve the functions of the fibrous material in the Reher publication. One of ordinary skill in the art would not have expected the improved battery performance of

the Reher publication simply by adding the fibrous material, without the electrode material, to the battery, as taught by the Holland patent, without the mixture of electrode material and fibers required by the Reher publication. Further, because the Reher publication is directed to an improved electrode material, Applicants assert that one of ordinary skill in the art would not be motivated to combine the fibrous material described in the Reher publication with the battery described in the Holland patent.

Claims 35, 46, 54 and 61 stand rejected as allegedly obvious under 35 U.S.C. 103(a) based on the combination of the Holland patent, the Reher publication and U.S. Patent No. 6,150,056 to Inagaki, et al. (the Inagaki patent). The Examiner uses the Inagaki patent to teach the use of potassium hydroxide as an electrolyte in batteries, and in nickel-metal hydride batteries in particular. Applicants assert that the Inagaki patent fails to provide the necessary missing elements, motivation to combine, or expectation of success as described above regarding the combination of the Holland patent and the Reher publication. Thus, claims 35, 46, 54 and 61 are allowable over this combination.

Rejections under 35 U.S.C. § 103(a) based on Holland & Zguris

Claims 33, 34, 37 – 45, 47, 49, 51 – 53, 55 – 60, 62 and 64 stand rejected under 35 U.S.C. § 103(a) as obvious based on the combination of the Holland patent and U.S. Patent No. 6,306,539 to Zguris (the Zguris patent).

Applicants submit that the Holland and Zguris patents, alone or in proper combination, fail to teach each and every element of the claims. Specifically, neither the Holland patent nor the Zguris patent teach fibrous material in fiber form, in combination with an electrolyte. The Examiner asserts that the Zguris patent teaches fibers that have a diameter of 0.8 microns. In fact, the Zguris patent repeatedly teaches that these fibers are formed into a mat. See col. 12, lines 7 – 9. Applicants submit that the fibrous material, because it is in the form of a mat, is not “in fiber form” prior to combination with an electrolyte. The Holland patent, as described above, discloses webs of fibrous material, not any material in fiber form in combination with an electrolyte. If anything the two referenced patents teach only adding “fibrous material,” i.e., “a material formed of fibers,” to the battery case, not fibers themselves in an un-aggregated form. Thus, Applicants assert that the combined teachings of both the Holland patent and the Zguris patent fail to teach each and every

element of the claims. As such, the combination fails to render the claims obvious.

Claims 35, 46, 54 and 61 stand rejected as allegedly obvious under 35 U.S.C. 103(a) based on the combination of the Holland patent, the Zguris patent and the Inagaki patent. Again, the Examiner uses the Inagaki patent to teach the use of potassium hydroxide as an electrolyte in batteries, and in nickel-metal hydride batteries in particular. Applicants repeat their previous assertion that the Inagaki patent fails to provide the necessary missing elements, as described above, regarding the combination of the Holland patent and the Zguris patent. Thus, claims 35, 46, 54 and 61 are not obvious in view of the combination and, Applicants submit, are allowable.

Claim 36 stands rejected as allegedly obvious under 35 U.S.C. 103(a) based on the combination of the Holland patent, the Zguris patent and U.S. Patent No. 4,238,303 to Fang (the Fang patent). Again, Applicants assert that the Fang patent fails to disclose the limitations that are missing for the combination of the Holland patent and the Zguris patent, and thus claim 36 is not obvious.

Claims 48, 50 63, and 65 stand rejected as allegedly obvious under 35 U.S.C. 103(a) based on the combination of the Holland patent, the Zguris patent and U.S. Patent No. 6,227,009 to Cusick, et al. (the Cusick patent). Applicants assert that the Cusick patent fails to disclose the limitations that are missing for the combination of the Holland patent and the Zguris patent, and thus these claims are not obvious.

U.S. Patent Number 5,376,480 to Shinoda, *et al.* (the Shinoda patent)

Applicants thank the Examiner for bringing the Shinoda patent to their attention. Applicants assert that the Shinoda patent does not anticipate the present claims. Furthermore, the Shinoda patent, either by itself or in proper combination with any of the previously cited references, does not render in the present claims obvious. Applicants submit that the Shinoda patent teaches adding fibers, particularly organic (i.e., carbon-based), polymeric fibers, to an electrolyte material and that this combination comprises a negative electrode material in an alkaline battery. Applicants note that Shinoda does not disclose fibrous material disposed in a battery between the battery's electrodes. The fibers in the Shinoda patent are exclusively located in the negative electrode itself. Therefore, the Shinoda patent does not teach each and

every element of the instant claims.

Further, one of ordinary skill in the art would not be motivated to combine the Shinoda patent teachings with any of the presently cited references to achieve the instant claims for several reasons. The function and purpose of adding the fibers to the electrode in Shinoda is not applicable to the cited references. First, Shinoda uses organic, polymeric fibers in the negative electrode of an alkaline battery for the purposes of “provid[ing] a . . . battery . . . devoid of mercury and which has high vibration strength and impact resistance, and which can maintain performance even under heavy load and low temperature conditions.” (emphasis added) The motivations the Shinoda patent describes are absent or are not applicable in any of the previously cited references. For instance, the batteries in Holland, Reher and Zguris are not alkaline batteries, nor do these references discuss the structural or mechanical impact of adding fiber to an electrolyte on the battery as a whole. Additionally, mercury is not a part of the batteries the cited references describe. Thus, the motivation and function use of the fibers in the Shinoda patent is entirely inapplicable to the batteries that cited references describe. Applicants submit that the Shinoda patent fails to anticipate the instant claims or render the instant claims obvious.

Conclusion

Applicants would like to thank the Examiner for his/her time and consideration of this case. If a telephone conversation would help clarify any issues, or help expedite prosecution of, this case, Applicants invite the Examiner to contact the undersigned at (617) 248-5222. Additionally, please charge any fees that may be required or credit any overpayment to our Deposit Account 03-1721.

Respectfully Submitted,
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